



Maui Meadows

Neighborhood Association

MMNA Position Statement on Wireless Communications Facilities

Approved: September 20, 2021; Revised October 25, 2021

MMNA Believes:

- The proliferation of personal wireless service facilities such as transmission towers, antennas, small wireless facilities, and micro wireless facilities strung on cables between utility poles puts Maui Meadows at risk;
- The installation of wireless communications facilities in Maui Meadows can create visual and aesthetic blights, and frustrate Maui Meadow's longstanding efforts to have a natural, residential, welcoming look and feel and a comfortable, safe community;
- If not adequately regulated the installation of wireless communications facilities within Maui Meadows poses a threat to the public health, safety, and welfare of its residents;
- The installation of wireless facilities can cause traffic and pedestrian safety hazards due to the unsafe placement of wireless facilities, as well as impacts to trees where proximity conflicts may require unnecessary trimming of branches or removal of roots due to undergrounding of equipment or lines;
- The County's public rights-of-way are a valuable resource, and the regulation of wireless installations in the public rights-of-way is necessary to protect and preserve aesthetics in Maui Meadows;
- Maui County has suffered numerous fires and major fires in some other jurisdictions ignited due to power pole failures in which wireless communications facilities contributed to overburdened power poles;
- There is ample scientific evidence, including US government studies, indicating adverse health effects from levels of wireless radiation well below the Federal Communication Commission (FCC) emission guidelines;

- Some residents of Maui Meadows have already been injured by wireless radiation emissions within the allowed FCC emissions levels;
- The FCC’s present wireless radiation rules are not biologically-based or sufficiently protective of human life, animal life, or the environment;
- The installation and operation of the facilities and equipment associated with wireless services often results in aesthetic and visual blight, reduces the value of adjacent properties, and may present economic challenges to the residents of Maui Meadows;
- Such installations create health and safety concerns, especially to those who may have pre-existing conditions exacerbated by exposure to wireless emissions, or who have been, or will be, directly sickened by exposure, presenting economic challenges to residents of Maui Meadows;
- The County should exercise its powers to protect its citizens, its right to exercise all available power and right over its own property and regulate the use and occupation of that property, and to regulate land use to the maximum extent allowed by law, while nonetheless respecting and adhering to the law.

RATIONALE

On February 8, 1996, the Congress of the United States enacted the Telecommunications Act of 1996 (P.L. No. 104-104) to deregulate the telecommunications industry, providing a more competitive environment for wired and wireless telecommunications services in the United States.

A concomitant effect of increased competition in the market for wireless telecommunication services is an increased demand for personal telecommunications facilities including antennas, transmission towers and ancillary facilities necessary for providing wireless service via existing and new technologies.

On June 21, 2018, Governor Ige signed into law the Hawai’i Wireless Fast Track Bill (HB 2651), to codify Federal Law and streamline the application process for Wireless Communication Facilities (WCFs) by establishing a process for wireless communication service providers to gain access to state- and county-owned poles to develop wireless facilities.

HB 2651 permitting requirements for small wireless facilities only apply “if required by the state or county”, thus, County regulation is likely needed before any requirements can be utilized, yet Maui County has not considered or adopted any regulation of small wireless facilities, leaving the County vulnerable to the rampant deployment of wireless facilities with disregard for the unique character and features of the Maui Meadows neighborhood.

Further, the FCC has not updated its wireless radiation emission guidelines since 1996. The guidelines are based on outdated science that does not address biological or environmental harms from wireless radiation, and does not account for the rapid proliferation of wireless devices and infrastructure that has happened in the last 25 years.

In recent legal action the FCC was presented with 11,000 pages of scientific evidence of nonthermal biological effects and environmental impacts from wireless radiation. After first ignoring that evidence the FCC, through an appeal process decided in August, 2021, has been forced by the Court to consider that substantial body of evidence for the first time; thus, current FCC guidelines cannot be assumed to adequately protect human health and the environment.

For these reasons, the MMNA seeks to protect the neighborhood and its inhabitants from the unregulated proliferation of personal wireless facilities infrastructure and supports the County in regulating wireless deployments to the fullest extent of the law.

Glossary

Antenna: an apparatus designed for the purpose of emitting radiofrequency (RF) radiation, to be operated or operating from a fixed location for the transmission of data. An antenna is typically mounted on or in a supporting structure such as a tower or building.

FCC (Federal Communications Commission): The governmental body tasked with setting wireless radiation emission safety guidelines.

Micro wireless facilities: A wireless facility generally mounted on cables strung between utility poles

Personal wireless service: Commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services.

Personal wireless service facility: Facilities for the provision of personal wireless services.

RF or radiofrequency: A type of electromagnetic radiation that includes radio waves and microwaves.

Small wireless facility: A wireless facility generally mounted on structures, such as utility poles, 50 feet or less in height including their antennas.

Tower: Any structure, including a freestanding mast, pole, monopole, guyed tower, lattice tower, free standing tower or other structure, designed and constructed for the primary purpose of supporting any FCC licensed or authorized wireless service facility antennas and their associated facilities.

Wireless communication facility or wireless service facility: A structure, antenna, pole, tower, equipment, accessory equipment and related improvements used, or designed to be used, to provide wireless transmission of personal wireless service.

References

- Abdel-Rassoul G., El-Fateh O.A., Salem M.A., Michael A., Farahat F., El-Batanouny M., & Salem E. (2007). Neurobehavioral effects among inhabitants around mobile phone base stations. *Neurotoxicology*, 28(2), 434-40.
- Achudume A., Onibere B., Aina F., & Tchokossa P. (2010). Induction of oxidative stress in male rats subchronically exposed to electromagnetic fields at non-thermal intensities. *Journal of Electromagnetic Analysis and Applications*, 2(8), 482-487.
- Adair E.R., Blick D.W., Allen S.J., Mylacraine K.S., Ziriak J.M., & Scholl D.M. (2005). Thermophysiological responses of human volunteers to whole body RF exposure at 220 MHz. *Bioelectromagnetics*, 26(6), 448-461.
- Adey W.R., Byus, C.V., Cain C.D., Higgins R.J., Jones R.A., Kean C.J., Kuster N., MacMurray A., Stagg R.B., & Zimmerman G. (2000). Spontaneous and nitrosourea-induced primary tumors of the central nervous system in Fischer 344 rats exposed to frequency-modulated microwave fields. *Cancer Research*, 60(7), 1857-1863.
- Affuso, E., Cummings, J. & Le, H. (2018). Wireless towers and home values: An alternative valuation approach using a spatial econometric analysis. *The Journal of Real Estate Finance and Economics*, 56. 10.1007/s11146-017-9600-9.
- Aitken R.J., Bennetts L.E., Sawyer D., Wiklendt A.M., & King B.V. (2005). Impact of radio frequency electromagnetic radiation on DNA integrity in the male germline. *International Journal of Andrology*, 28, 171-179.
- Alster, N. (2015). Captured agency: How the federal communications agency is dominated by the industries it presumably regulates. *Harvard Edmund J. Safra Center for Ethics*.
- Belpomme, D., Campagnac, C., & Irigaray, P. (2015). Reliable disease biomarkers characterizing and identifying electrohypersensitivity and multiple chemical sensitivity as two etiopathogenic aspects of a unique pathological disorder. *Reviews on Environmental Health*, 30(4), 251-271.
- Belpomme, D., & Irigaray, P. (2020). Electrohypersensitivity as a newly identified and characterized neurologic pathological disorder: How to diagnose, treat, and prevent it. *International Journal of Molecular Sciences*, 21(6), 1915-1970.
- Bond, S., & Wang K. (2005). The impact of cell phone towers on house prices in residential neighborhoods. *The Appraisal Journal*, summer, 256-277.
- Broom, K.A., Findlay, R., Addison, D.S., Goiceanu, C. & Sienkiewicz, Z. (2019). Early-life exposure to pulsed LTE radiofrequency fields causes persistent changes in activity and behavior in C57BL/6 J mice. *Bioelectromagnetics*, 40, 498-511.

Burgoyne Appraisal Company (2017). Impact of communication towers and equipment on nearby property values, *WT Docket no.* 16-421.

Buttiglione, M., Roca L., Montemurno E., Vitiello F., Capozzi V., & Cibelli G. (2007). Radiofrequency radiation (900 MHz) induces Egr-1 gene expression and affects cell-cycle control in human neuroblastoma cells. *Journal of Cell Physiology*, 213(3), 759-767.

Dieudonné M. (2019). Becoming electro-hypersensitive: A replication study. *Bioelectromagnetics*, 40(3), 188–200.

Foerster, M., Thielens, A., Joseph, W., Eeftens, M., & Röösli, M. (2018). A prospective cohort study of adolescents' memory performance and individual brain dose of microwave radiation from wireless communication. *Environmental Health Perspectives*, 126(7), 1-13.

Gupta, S.K., Mesharam, M.K., & Krishnamurthy, S. (2018). Electromagnetic radiation 2450 MHz exposure causes cognition deficit with mitochondrial dysfunction and activation of intrinsic pathway of apoptosis in rats. *Journal of Biosciences*, 43(2), 263-276.

Heuser, G., & Heuser, S. A. (2017). Functional brain MRI in patients complaining of electrohypersensitivity after long term exposure to electromagnetic fields. *Reviews on Environmental Health*, 32(3), 291–299.

Johansson O. (2006). Electrohypersensitivity: State-of-the-art of a functional impairment. *Electromagnetic Biology and Medicine*, 25(4), 245–258.

Karimi N., Bayat M., Haghani M., Saadi H.F., & Ghazipour G.R. (2018). 2.45 GHz microwave radiation impairs learning, memory, and hippocampal synaptic plasticity in the rat. *Toxicology and Industrial Health*, 34(12), 873-883.

Kaszuba-Zwoińska, J., Gremba, J., Gałdzińska-Calik, B., Wójcik-Piotrowicz, K., & Thor, P. J. (2015). Electromagnetic field induced biological effects in humans. *Przegląd Lekarski*, 72(11), 636–641.

Khurana V.G., Hardell L., Everaert J., Bortkiewicz A., Carlberg M., & Ahonen M. (2010). Epidemiological evidence for a health risk from mobile phone base stations. *International Journal of Occupational and Environmental Health*, 16(3), 263-267.

Levallois, P. (2002). Hypersensitivity of human subjects to environmental electric and magnetic field exposure: A review of the literature. *Environmental Health Perspectives*, 110(4), 613-18.

Levitt B.B., Lai H.C., & Manville A.M. (2021). Effects of non-ionizing electromagnetic fields on flora and fauna, part 1. Rising ambient EMF levels in the environment. *Reviews on Environmental Health*.

Lupi D., Palamara Mesiano M., Adani A., Benocci R., Giacchini R., Parenti P., Zambon G., Lavazza A., Boniotti MB., Bassi S., Colombo M., & Tremolada P. (2021). Combined Effects of Pesticides and Electromagnetic-Fields on Honeybees: Multi-Stress Exposure. *Insects*, 12(8).

McNamee, J., & Chauhan, V. (2009). Radiofrequency radiation and gene/protein expression: A review. *Radiation Research*, 172(3), 265-287.

Melnick, R. (2019). Commentary on the utility of the national toxicology program study on cell phone radiofrequency radiation data for assessing human health risks despite unfounded criticisms aimed at minimizing the findings of adverse health effects. *Environmental Research*, 168, 1-6.

Morgan, L., Miller, A., Sasco, A., & Davis, D. (2015). Mobile phone radiation causes brain tumors and should be classified as a probable human carcinogen. *International Journal of Oncology*, 46(5), 1865-1871.

National Association of Realtors Magazine. (2021). Homeowners complain about ugly 5G boxes in their yards. *National Association of Realtors*, January, News and Commentary: Daily News.

National Institute for Science, Law & Public Policy (2014). Neighborhood cell towers & antennas – do they impact a property’s desirability. *Business Wire*, Press Release.

National Toxicology Program (2018). NTP technical report on the toxicology studies and carcinogenesis studies in Sprague Dawley rats exposed to whole-body radio frequency radiation at a frequency and modulations used by cell phones. *National Toxicology Program*, TR 595.

National Toxicology Program (2018). NTP technical report on the toxicology studies and carcinogenesis studies in B6C3fL/N mice exposed to whole-body radio frequency radiation at a frequency and modulations used by cell phones. *National Toxicology Program*, TR 596.

Pall, M. (2015). Microwave frequency electromagnetic fields (EMFs) produce widespread neuropsychiatric effects including depression. *Journal of Chemical Neuroanatomy*, 75, 1-25.

Realtor Magazine (2012). Home owners object to cell tower installations. *Realtor Magazine*, November, News and Commentary: Daily News.

Rostami, A., Shahani, M., Zarrindast, M. R., Semnanian, S., Rahmati Roudsari, M., Rezaei Tavirani, M., & Hasanzadeh, H. (2016). Effects of 3 Hz and 60 Hz extremely low frequency electromagnetic fields on anxiety-like behaviors, memory retention of passive avoidance and electrophysiological properties of male rats. *Journal of Lasers in Medical Sciences*, 7(2), 120–125.

Russell, C. (2018). 5G wireless telecommunications expansion: Public health and environmental implications. *Environmental Research*, 165, 484-495.

Smith-Roe, S., Wyde, M., Stout, M., Winters, J., Hobbs, C., Shepard, K., Green, A., Kissling, G., Shockley, K., Tice, R., Bucher, J., & Witt, K. (2020). Evaluation of the genotoxicity of cell phone radiofrequency radiation in male and female rats and mice following subchronic exposure. *Environmental and Molecular Mutagenesis*, 61(2), 276-290.

Thomas, S., Heinrich, S., von Kries, R. & Radon, K. (2010). Exposure to radio-frequency electromagnetic fields and behavioural problems in Bavarian children and adolescents. *European Journal of Epidemiology*, 25, 135–141.